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ABSTRACT

The assessment of the institutional effectiveness of community colleges is illustrated through a description of the assessment program used by Johnson County Community College in Overland Park (Kansas). Emphasis is on measures of the degree to which students meet their educational objectives, identified through career, transfer, and "leaver" statistics. The model used contains several components, including student and former student surveys, cognitive outcomes assessment, systematic program review, grade and attrition reports, and occasional community surveys and projects. A career student follow-up conducted in 1989 for students who completed a career program in 1985-86, surveyed 292 former students (75.8% of those contacted). A transfer student follow-up in 1989 sought information from students who had transferred to a four-year college. A mail survey resulted in 1,357 responses (27.8% of those identified). The survey of students who left the community college identified 8,624 who had attended some classes in 1988-89, but who did not reregister in 1990. A total of 2,847 completed surveys were returned by this group, a response rate of 33.0%. The types of data collected from these surveys provided valuable information about overall institutional effectiveness through a method particularly suited to the community college, where students' educational objectives may be extremely varied. Four tables present study data. (SLD)

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ASSESSMENT OF COLLEGE OUTCOMES: STUDENT EDUCATIONAL GOAL ATTAINMENT

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INTRODUCTION

The general issue of institutional effectiveness--what it means, how to demonstrate it, and how and to whom it should be communicated--has taken on increasing importance in higher education in recent years. Numerous national meetings, articles, workshops, and speeches have addressed this issue. One regional accrediting organization, the Southern Association of Colleges and Schools, has included a formal institutional effectiveness criterion into its accreditation self-study process and published a manual to assist member schools and colleges in addressing that criterion.

Demonstrating institutional effectiveness takes on special significance for community colleges. Community colleges typically have a much broader mission than four-year colleges and universities. In addition to traditional freshman/sophomore level coursework, community colleges provide career training, occupational retraining, remedial/developmental coursework, community/continuing education programs, courses for special populations, and a variety of other educational offerings. Community college students often differ dramatically from traditional college students. They are much more diverse in terms of age, background, employment status, preparation, and educational objective than their four-year college/university counterparts (Bean & Metzner, 1985). Thus, measures of institutional effectiveness common to four-year colleges and universities (e.g., number of graduates or proportion of graduates to students admitted) are, in most cases, not applicable to community colleges.

Therefore, one critical issue facing community colleges as they begin to address assessment of outcomes and effectiveness is identification of the appropriate measures for such assessments. It is the purpose of this paper to attempt to briefly address this important issue in assessment of community college effectiveness.

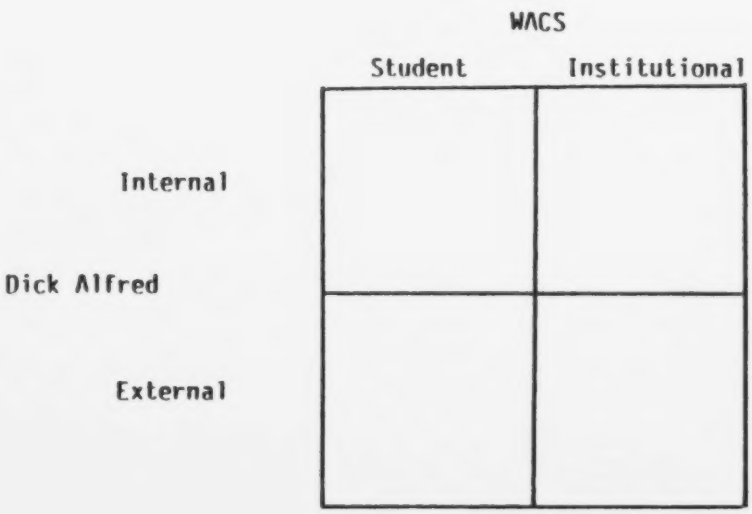
What to Measure

The question "What are the appropriate measures to use for assessment of community college institutional effectiveness?" is one of the most crucial issues facing those of us charged with the responsibility for such assessments. As noted above, this issue is much different, and possibly more complex, for those of us in community colleges than for our four-year college/university counterparts. Resolution of this issue takes on even more importance given that choice of measures will, to a large degree, drive the assessment efforts themselves. Thus, choice of assessment measures must be given careful consideration and becomes one of the first major tasks to be undertaken in an effectiveness/outcomes assessment program.

Although there may be many conceptual frameworks within which to consider the types of measures appropriate for assessing institutional effectiveness, two seem to be of particular help in organizing and focusing such efforts for community colleges.

The Western Association of Colleges and Schools (WACS) has suggested a distinction between two major types of assessment activities: those that specifically address student learning, and those addressing broader institutional and policy level issues. A second conceptual framework has been posited by Dick Alfred at the University of Michigan (1989). He also suggested a two-tiered approach but with a slightly different perspective. Namely, he identified those indices which reflect internal variables ("inside-out" indices) and those which reflect external variables ("outside-in" indices).

An interesting perspective on assessment measures is possible by placing these two frameworks as dimensions of a simple "Effectiveness Assessment Matrix," as follows:



Completion of the cells of the matrix yields the following categories of measures of community college effectiveness:

Internally-Directed Student Measures:

- Satisfaction of individual educational objectives
- Program completion or receipt of degree or certificate
- Individual course grades, overall GPA's
- Student performance on assessments of cognitive outcomes
- Student perceptions of noncognitive outcomes

Externally-Directed Student Measures:

- Student performance on professional licensure exams
- Transfer student success in the receiving college/university (in terms of course grades, progress toward and receipt of degree)
- Career student success (in terms of obtaining appropriate employment, career advancement, and career satisfaction)

Internally-Directed Institutional Measures:

- Results of systematic, comprehensive program reviews
- Analysis of grades and retention/attrition rates at the course and program level
- Results of client/user (i.e., students, faculty, staff) evaluations of programs and services
- Student evaluations of instructors/counselors/advisors

Externally-Directed Institutional Measures:

- Results of employer evaluations of career student preparation
- Results of external image surveys
- Results of economic impact studies

It is clear, of course, that these categories and the placement of measures in them are not immutable. For example, student performance on licensure exams and career and transfer student success may also serve as important internal indices of program success and effectiveness. Similarly, program completion, graduation, and attrition rates may serve as indices of effectiveness for various external audiences. However, this framework does provide a helpful way to organize and begin to think about measures of effectiveness.

Another advantage of this approach is that it brings needed balance to the measurement of effectiveness. It is Dick Alfred's contention, quite correctly, that community colleges are much more comfortable and experienced with internal (inside-out) measures of effectiveness than with external (outside-in) measures. He argues that, in many cases, the externally directed measures are as important as, or more important than, internal ones since the former convey effectiveness information to the various external publics (e.g., community members, legislators, state board members) upon which community colleges depend for support and financing. Thus, use of the Effectiveness Assessment Matrix described above to guide the design and implementation of an effectiveness assessment program will help provide the kind of balance necessary to address each of the major areas in which community college effectiveness may (should?) be demonstrated.

It goes without saying that many institutions do not have the resources to collect all the information outlined in the matrix. In addition, many external forces also operate to determine which effectiveness indicators will be collected and reported. Thus, the shape of an individual college's effectiveness assessment program will almost always, to some degree, be determined both by available internal resources and by the various external exigencies operating in that situation. It is probably important, however, that to the degree possible some data be collected regarding each of the four major categories outlined in the matrix.

The matrix and the measurement categories it subsumes provide the components of a comprehensive institutional effectiveness assessment program. All of this information can be collected using relatively few data collection techniques. Specifically, all of these measures may be obtained through the following procedures:

- Follow-up studies of former students (transfer, career, and others)
- Assessments of cognitive outcomes
- Systematic program reviews
- Analyses of course/program grades and retention/attrition rates
- Student evaluations of instructors/counselors/advisors
- Client/user evaluation surveys of programs and services
- Community image studies
- Economic impact studies

Design and implementation of each of these procedures involves significant time, effort, and commitment of resources. However, it is clear that these are not insurmountable efforts. They are independent, discrete, "do-able" tasks, each of which may be addressed one at a time as institutional resources and relevant internal and external exigencies permit. Moreover, most of these procedures yield several of the measures of effectiveness outlined in the Effectiveness Assessment Matrix.

Thus, although selecting from the wide array of possible measures of effectiveness may initially seem to present a bewildering challenge and serve as an impediment to the initiation of an assessment program, the effort becomes much more manageable when addressed in an organized, systematic way, as outlined above.

There are two important components of the traditional community college mission which may not seem to be addressed, at least at first glance, in the above discussion, namely, access for underserved populations and the various continuing/community education (noncredit) functions. However, assessment of the effectiveness of continuing education, including such services as continuing professional education and business and industry contract training programs, can be accomplished quite easily through client/user evaluation surveys (of both students and client companies) and as a part of overall comprehensive program reviews.

Measuring the degree to which institutions are successful in carrying out that component of their mission dealing with promoting access to underserved populations (e.g., minorities, women, senior adults) also does not appear to be taken into account in the foregoing discussion. This is especially true since the data gathering procedures described above generally deal with measurement of outcomes and "access" is not typically defined as an outcome, at least in the traditional sense. Effectiveness of an institution's commitment to and success in fostering expanded access can be addressed, however, as a component of systematic program reviews, as are a variety of other "input" or "process" variables (e.g., enrollments, budgets, levels of staffing, etc.).

The JCCC Institutional Effectiveness Assessment Model

Johnson County Community College has developed an institutional effectiveness assessment model based on the Effectiveness Assessment Matrix and the corresponding measurement techniques outlined above. The major components of that model are as follows:

1. Career Student Follow-up

   Career student follow-up studies are conducted one and three years after career program students complete a program (i.e., earn a degree or certificate) or leave with "marketable skills." Both telephone and mail surveys assess former students' career and life progress, the degree to which they accomplished their educational objective, perceptions of a variety of cognitive and noncognitive outcomes, and evaluations of their instructional program and other college programs and services.

   Employers of former career students currently working in jobs related to their program of study are also surveyed by mail to determine their evaluations of the training and preparation those students received at JCCC.

2. Transfer Student Follow-up

   The transfer follow-up study is conducted six months to one year after students transfer from JCCC to a four-year college or university. These former students, identified by the transfer institution, are surveyed by mail to determine their perceptions of their transfer preparation at JCCC, JCCC programs and services compared to those at the transfer institution, cognitive and noncognitive outcomes of their JCCC experiences, and the degree to which they accomplished their educational objective at the community college.

3. Educational Objective "Leaver" Surveys

   These surveys are directed at those community college students who neither completed a career program nor transferred to a four-year college or university, but enrolled in the community college for a variety of other reasons. Leavers are identified by comparison of enrollment files from three consecutive semesters. Transfer students and career program completers are then deleted. The resulting students are surveyed by mail and/or telephone one and three years after leaving the college. Again, the surveys address accomplishment of educational objective, perceptions of cognitive and noncognitive outcomes, and evaluations of JCCC programs and services.

4. Cognitive Outcomes Assessment

   Students who meet a specified set of criteria (completion of a maximum of 60 credit hours, at least 35 of which were earned at JCCC) are asked to volunteer for one of three half-day Saturday testing dates early in each semester. A set of incentives are offered to induce participation. Four modules (reading, mathematics, writing, and critical thinking) of the ACT CAAP (Collegiate Assessment of Academic Proficiency) are utilized. Since the college uses the ACT ASSET for mandatory entry-level assessment and placement, use of the CAAP will, in the future, permit both value-added and norm-referenced comparisons of cognitive outcomes.

5. Systematic Program Review

All college programs and services, including credit and noncredit instruction, student services, and other academic, administrative, and support services rotate through a five-year program review cycle. Separate evaluation packets have been created for career programs, transfer programs, continuing education programs, and administrative/ student service programs. The program review process is coordinated by the Office of Institutional Research and occurs annually from August through January.

6. Student Evaluation of Instructors/Counselors/Advisors

The Office of Institutional Research also coordinates student evaluation of instructional and student development personnel. Separate evaluation systems are utilized for instructors, counselors, and career planning and placement advisors each semester. Results are provided to the individuals evaluated and to appropriate administrators.

7. Grade/Attrition Report; Drop Survey

Each semester the Office of Institutional Research generates a grade/attrition report which provides the grade distribution and attrition rate for all credit classes sorted by section and instructor. Relevant information from this report is brought to the attention of the Dean of Instruction. In addition, all students who drop a course during the semester complete a short survey detailing the reasons for their withdrawal. These data are compiled annually in a report provided to appropriate college administrators.

8. Client/User Evaluation Surveys

The Office of Institutional Research conducts annual client/user evaluation surveys of student services (e.g., counseling, admissions), auxiliary services (food service, bookstore), the library, open labs (e.g., the instructional data processing lab), and resource centers (e.g., the math resource center, academic achievement center). These evaluations are conducted in October and November of each year and utilize both telephone and mail survey methodologies. Reports of results are provided to appropriate administrators and include longitudinal comparisons with results from prior years.

9. Occasional Community Surveys/Projects

The Office of Institutional Research conducts, on a systematic basis, major surveys and projects which provide additional information regarding the institution's effectiveness. Examples are the JCCC Economic Impact Study conducted at approximate five-year intervals, and the JCCC Community Image Survey, conducted every four years.

It is clear that, as noted earlier, community college students are much more diverse than their four-year college counterparts. It thus follows that their personal educational goals and reasons for attending would be much more varied and that traditional measures of educational achievement (e.g., graduation rates) would not be truly representative of the array of possible outcomes in the community college setting. On the other hand, given this diversity of educational goals, one measure of effectiveness which would seem to be most appropriate for community colleges would be the degree to which students in those colleges achieve their educational objectives (Losak, 1986).

Thus, the remainder of the paper will deal with those components of the JCCC effectiveness assessment model which include measures of the degree to which students meet their educational objectives, specifically the career, transfer, and "leaver" surveys.

Method

As noted above there are three types of student follow-up surveys in the JCCC institutional effectiveness model, namely, surveys of career program completers, transfer students, and students who have taken credit courses but neither formally transferred nor completed a career program. This paper reports the results of each of these types of surveys: a career student follow-up conducted in the spring of 1989 for students who had completed a career program during the 1985-1986 academic year; a transfer student follow-up conducted in the late spring of 1989 for students who had transferred from JCCC to a four-year college/university prior to the 1988-1989 academic year; and a "leavers" survey conducted in the fall of 1989 for students who had taken credit courses during the 1988-1989 academic year, had not completed a career program, but had not returned to the college in fall 1989.

While these surveys were designed for the specific student groups outlined above, they each have a core of items in common. This allows for comparisons across the various types of students who attend JCCC as well as longitudinal comparisons within and between those groups of students. Those common components are:

- JCCC enrollment history
- Educational goal attainment information
- Evaluation of affective outcomes
- Evaluation of educational and support services
- Overall evaluation of JCCC experiences
- Current educational status
- Demographics

In addition, each survey contains specific sets of items appropriate to the student group being surveyed. Each of the surveys was designed and developed in the JCCC Office of Institutional Research.

The following discussion will consist of a description of the specific procedures involved in each of these survey efforts.

Career Student Follow-up

This "long-term" career student follow-up survey was conducted with students who had completed a JCCC career program three years prior to the study (i.e., during the 1985-1986 academic year). Specifically, these were career program students who had received an Associate of Arts degree, a certificate, or left the college with "marketable skills" (as identified by the appropriate program director/coordinator); 385 such students were identified.

In addition to the common core of items listed above, the career student follow-up survey included questions dealing with detailed employment information and career and educational progress.

Survey methodology included first-phase repeated attempts (if necessary) to interview each identified student by telephone. These telephone surveys were conducted by a commercial market research firm. Students who were not reached by telephone were sent a follow-up mail survey. These combined methodologies resulted in 292 completed surveys, for a 75.8% response rate.

Transfer Follow-up

The transfer follow-up study was conducted with students who had transferred from JCCC to a four-year college or university prior to the 1988-1989 academic year. Two techniques were used to identify these students. First, lists of students who had transferred from JCCC were obtained from the seventeen four-year recipient institutions to which most JCCC students transfer. In addition, all students who had requested a transcript be sent to a four-year institution during the 1987-1988 academic year were sent a short postcard survey to determine their academic status. Those who indicated that they had transferred to a four-year institution were added to the lists provided by the transfer institutions. In this way 4,883 transfer students were identified.

The transfer follow-up survey was comprised of transfer-specific items such as evaluation of transfer preparation and college choice information, in addition to the common survey core. A mail survey methodology was utilized with a second mailing of the survey two weeks after the initial mailing; 1,357 surveys were returned for a 27.8% response rate.

In addition to the survey data current student information, including data on academic progress (e.g., number of hours attempted, number of hours completed, and cumulative GPA) were supplied for each student by the transfer institutions. Both these and the survey data were included in the data analysis file.

Educational Objectives "Leavers" Survey

The "leavers" survey was conducted on students who had attended the college during the 1988-1989 academic year, but had neither completed a career program nor returned to the college in fall 1989. This group thus represented that large component of community college students who attend only for a few selected courses to meet their personal educational objective and never intend to transfer, graduate, or complete a career program.

Identification of these students was accomplished by comparing the 1988-1989 student data file with files from the fall 1989 semester; 9,216 students who had attended during the 1988-1989 academic year but did not return in fall 1989 were identified. Career program completers were then deleted from this list and the remainder designated as leavers. This procedure resulted in a list of 8,624 students.

In addition to the common survey core the survey included items related to the students' reasons for not returning to JCCC. A mail survey methodology was again utilized with a follow-up mailing two weeks after initial survey distribution. This procedure produced 2,847 completed surveys for a 33.0% response rate.

RESULTS

Major results of these three surveys may be seen in Tables 1-4. Table 1 provides demographic and academic status of the respondents to each of the surveys. For all three surveys respondents were roughly two-thirds female and one-third male. Median age ranged from 22 to 29 years, reflecting the college's diverse student population. Race distribution for all surveys reflected that of the college's service area, i.e., predominantly white. As would be expected, career program completers had completed a relatively large number of credit hours at JCCC and leavers only a few. However, the median number of credit hours completed by transfer students was surprisingly low, representing, as it does, less than the equivalent of one year of full-time attendance. Finally, the educational objectives of survey respondents were generally as expected with nearly 70 percent of transfer respondents indicating an intent to transfer and 78 percent of career respondents reporting career-related objectives. Responses for leavers were distributed across educational objectives, with almost 50 percent indicating an intent to transfer. This was due, in part, to the lack of deletion of transfer students from the list of leavers, an oversight that has been corrected for subsequent administrations of the survey.

Tables 2-4 illustrate comparative responses from the three groups of former students for three major components of the surveys. It is clear from Table 2 that large majorities of respondents to all three surveys reported very positive experiences at JCCC. From approximately 78 percent to 92 percent of respondents reported that they achieved their educational objective at JCCC and the vast majority of those indicated that the college helped them to do so; 85 percent or more would attend JCCC again; more than 90 percent would recommend JCCC to their friends; and between 73 percent and 94 percent would encourage their children to attend. Finally, between 73 percent and 95 percent indicated that JCCC improved the quality of their lives, apart from any financial benefit.

Table 3 illustrates students' perceptions of how their JCCC experiences "should have" and "did" help them improve in a variety of cognitive and non-cognitive areas. More than half of the respondents indicated that JCCC helped improve their knowledge of arts and sciences, oral and written communication skills, tolerance for people and ideas, and time management skills. In

addition, approximately half of the respondents reported that their experiences at the college helped them clarify their personal goals and values, enhanced their interpersonal skills, and improved their ability to make good decisions.

Table 4 illustrates comparable levels of satisfaction reported by students on all three surveys for a variety of aspects of their JCCC and recipient transfer institution experiences. Of primary interest are those responses from transfer students. As is clear in the table, from approximately 55 percent to 85 percent of respondents reported satisfaction with all aspects of their JCCC transfer preparation with the exception of job placement services and financial aid. In addition, students were more satisfied at JCCC than at their four-year institution with all aspects of their experience except course variety, job placement services, and financial aid.

It is also interesting to note that ratings for all three major survey components were generally higher for career students than for transfer students or leavers. It is reasonable to assume that JCCC is the primary postsecondary experience for career program completers and, further, that is not so for transfer students and "leavers." It is not surprising then, that career program completers feel a stronger sense of affiliation with, and thus more positively about, their JCCC experiences than the other two groups of former students. In spite of these differences, however, ratings by transfer students and leavers were generally very positive.

CONCLUSIONS

It is clear that the types of data collected and reported here provide valuable information regarding overall measurement of institutional effectiveness. This is especially true in community colleges since traditional measures of effectiveness and student success often do not accurately reflect community colleges' success in helping their students meet their varied educational objectives.

It is possible, of course, to question the validity and representativeness of the data on which this conclusion is based, particularly since two of the surveys from which those data were compiled had response rates in the 30%-35% range. It must be remembered, however, that assessment of effectiveness is not an "exact science." What is needed here is information that is credible and useful, if perhaps not necessarily perfect. This point has been eloquently made both by Marchese (1990) and Ewell (1988). Ewell in particular has cautioned us not to get trapped by what he calls the "perfect data" fallacy. That is, if we wait to measure outcomes and effectiveness until perfect instruments and absolutely valid and representative data come along, we'll never measure or assess anything. The point here is not to denigrate the value of valid, reliable, representative measurement--indeed, we need all of it we can get as we begin to assess outcomes and overall effectiveness. Rather, we must collect the best data possible and make sure to be realistic in our appraisal of its certainty and the conclusions we draw from it.

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Table 1

RESPONDENT CHARACTERISTICS

Characteristic	88-89 "Leavers"	85-86 Career	88-89 Transfer
Sex			
Male	34.1%	34.2%	36.4%
Female	64.7	65.8%	63.2
Unknown	1.2	-	.4
Median Age	26.4	29.3	22.0
Race			
American Indian/ Alaskan	3.1%	.3%	2.3%
Hispanic	1.4	.7	1.3
Asian/ Pacific Islander	1.8	.7	1.8
Black	1.3	1.4	1.2
White	90.9	96.9	92.4
Unknown	1.5	-	1.0
Marital Status			
Never Married	46.4%	30.5%	69.3%
Currently Married	40.1	57.2	21.1
Previously Married	9.1	12.3	4.6
Unknown	4.4	-	5.0
Median Credit Hours Completed at JCCC	8.65	48.89	21.0
Primary Educational Objective			
Prepare to Transfer	49.6%	13.4%	69.5%
Prepare to Enter Job Market	7.4	41.4	3.2
Improve Skills for Present Job	17.8	19.5	1.7
Explore Career Possibilities	5.9	3.4	4.6
Remedy or Review Basic Skills	1.5	1.0	1.1
Study Topics of Interest/ Self-improvement	11.1	4.8	2.6
Prepare to Change Careers	4.8	13.7	1.8
Other/Unknown	2.0	27.0	15.5

Table 2

Reactions to/Perceptions of JCCC

Item	Percent "Affirmative Responses"		
	88 - 89 "Leavers"	85 - 86 Career	88 - 89 Transfer
JCCC Improved Quality of Life	73.8%	94.5%	72.8%
Would Attend JCCC Again	89.7	94.9	84.5
Would Recommend JCCC to Friends	93.0	98.6	91.6
Would Encourage Children to Attend JCCC	73.7	93.5	73.0
Achieved Educational Objective	78.3	91.5	91.7
JCCC Helped	88.3	97.0	82.5

Table 3

Self Report "Value Added"

Value	Percent Agreement					
	JCCC Should Have			JCCC Did		
	88-89 "Leavers"	85-86 Career	88-89 Transfer	88-89 "Leavers"	85-86 Career	88-89 Transfer
Knowledge of Arts and Sciences	64.2%	69.9%	69.2%	61.7%	71.8%	65.9%
Written Communication	65.9	76.8	80.4	58.2	62.3	73.0
Oral Communication	60.6	80.5	68.3	53.6	71.8	56.5
Tolerance – People & Ideas	57.1	68.2	61.2	57.6	64.0	57.7
Time Management	58.7	66.8	61.2	54.5	61.8	50.2
Personal Values/Goals	53.9	66.0	56.0	47.5	61.7	46.2
Decision Making	54.6	79.0	53.9	49.6	74.8	47.9
Interpersonal	42.7	58.5	50.4	46.5	56.3	50.6

Table 4

JCCC/Transfer Satisfaction

Aspect	Percent Satisfied					
	At JCCC			At Transfer Institution		
	88-89 "Leavers"	85-86 Career	88-89 Transfer	88-89 "Leavers"	85-86 Career	88-89 Transfer
Quality of Instruction	84.1%	94.8%	84.9%	77.6%	79.4%	75.5%
Facilities & Equipment	81.9	95.8	80.6	74.0	71.3	71.0
Class Scheduling	79.5	86.9	83.1	56.6	70.4	47.1
Course Variety	75.7	89.4	67.4	82.8	82.3	80.7
Individual Attention	80.9	90.4	80.5	61.1	57.9	57.8
Registration Process	75.7	89.0	82.4	49.0	51.1	44.0
Career/Transfer Preparation	54.2	75.2	65.7	53.8	64.4	38.3
Advisment/Counseling	54.8	72.9	55.9	51.7	48.6	44.2
Job Placement Services	22.7	64.4	23.6	32.6	32.5	36.6
Financial Aid	19.8	48.3	23.1	43.2	58.3	38.8